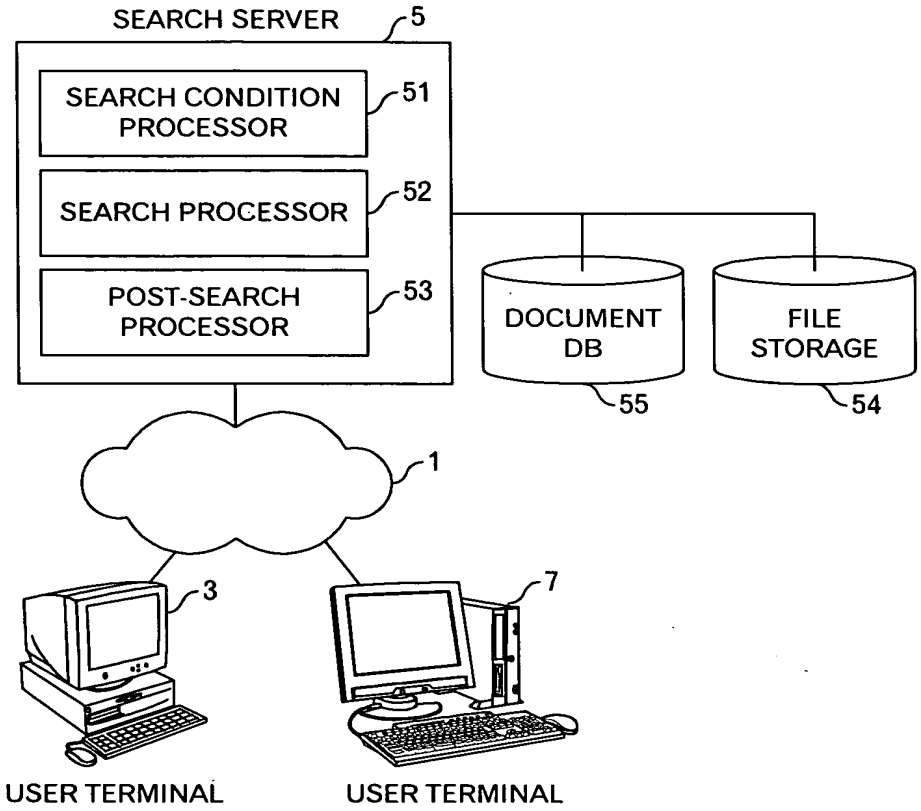
SEARCH SERVER
5
SEARCH CONDITION PROCESSOR
51
SEARCH PROCESSOR
52
POST-SEARCH PROCESSOR
53
DOCUMENT DB
55
FILE STORAGE
54
1
3
7
USER TERMINAL
USER TERMINAL

FIG.1

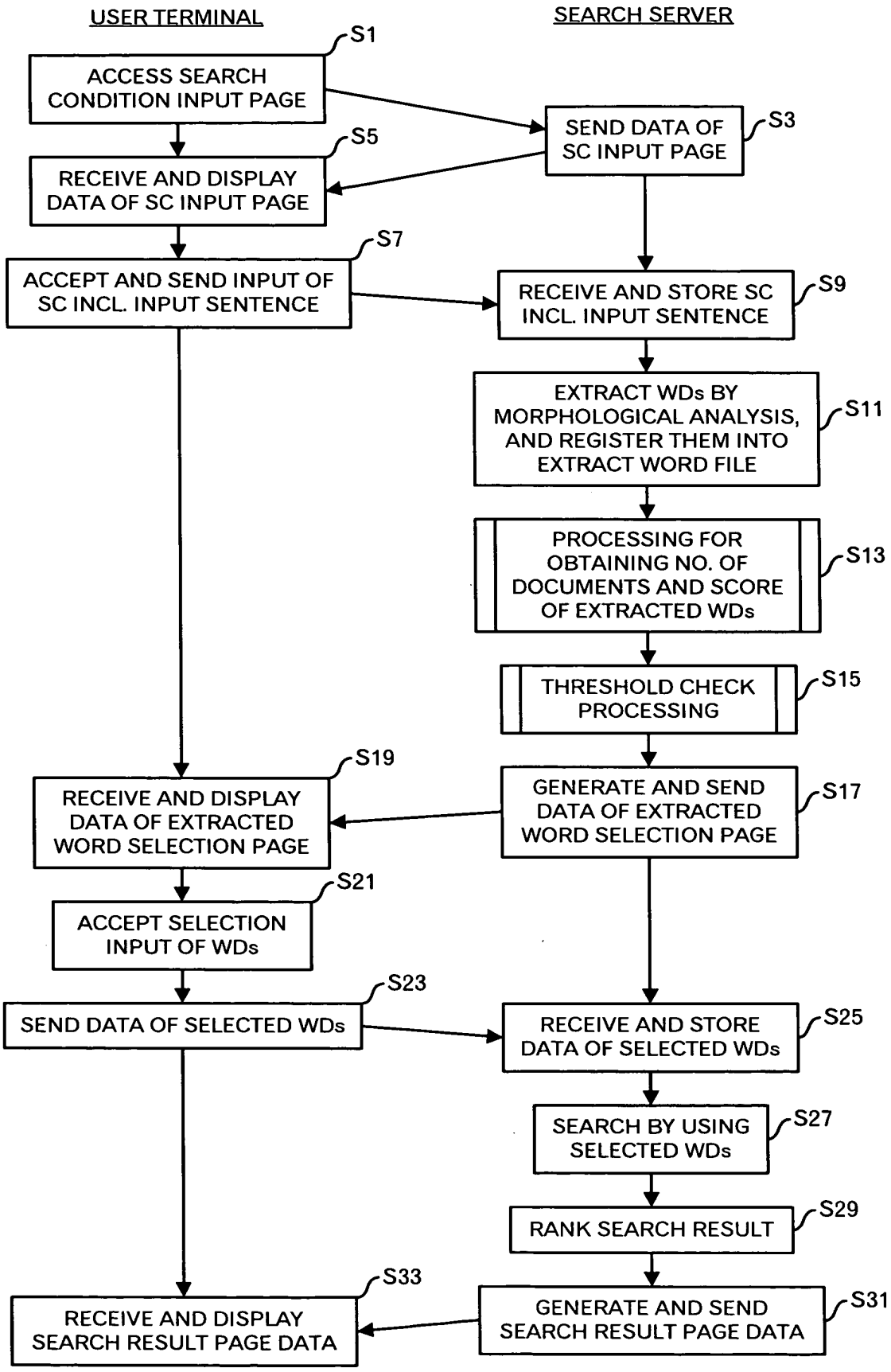


FIG.2

SC: SEARCH CONDITION
WDs: WORDS AND PHRASES

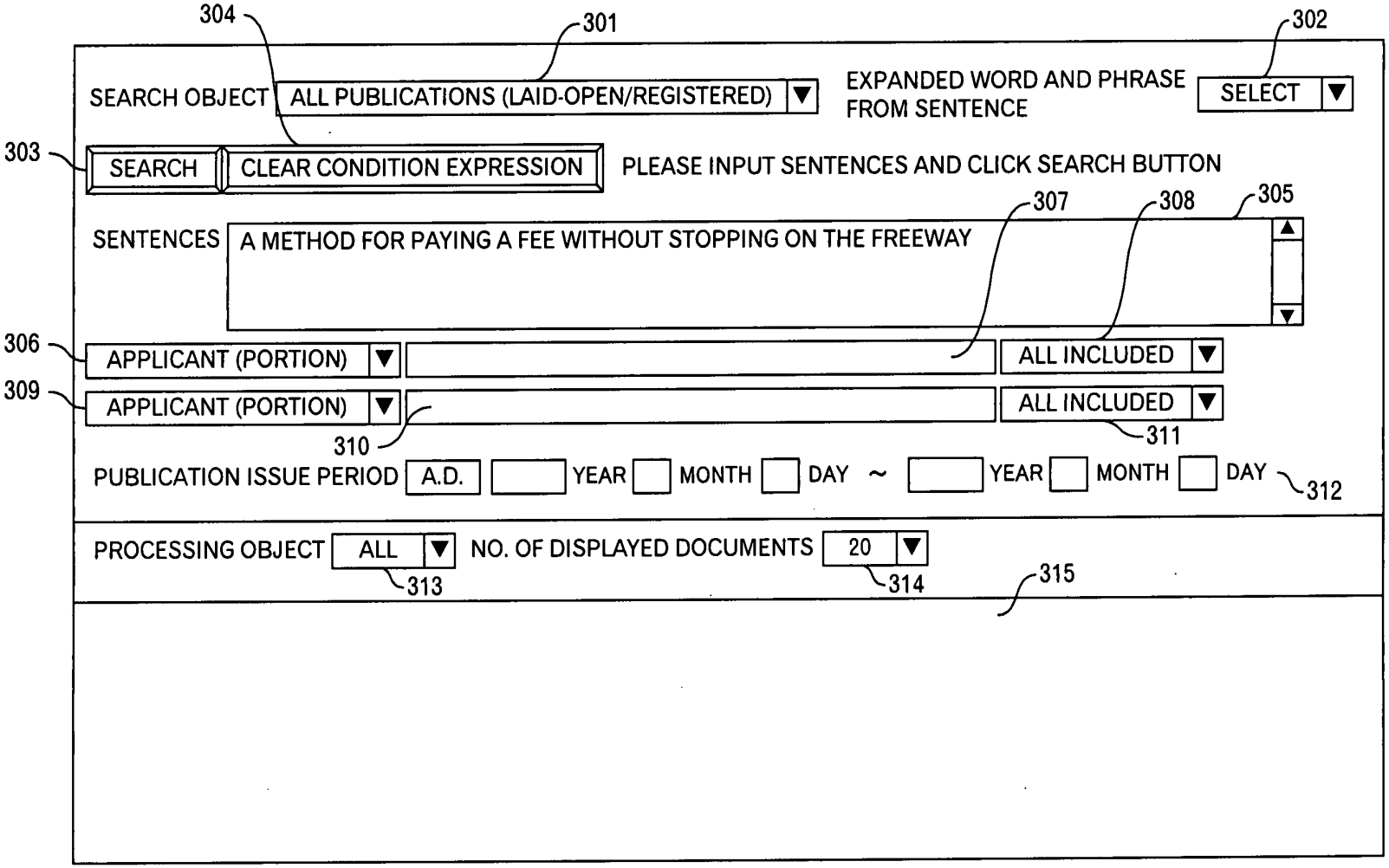
304
301
302
SEARCH OBJECT
ALL PUBLICATIONS (LAID-OPEN/REGISTERED)
EXPANDED WORD AND PHRASE FROM SENTENCE
SELECT
303
SEARCH
CLEAR CONDITION EXPRESSION
PLEASE INPUT SENTENCES AND CLICK SEARCH BUTTON
307
308
305
SENTENCES
A METHOD FOR PAYING A FEE WITHOUT STOPPING ON THE FREEWAY
306
APPLICANT (PORTION)
ALL INCLUDED
309
APPLICANT (PORTION)
ALL INCLUDED
310
311
PUBLICATION ISSUE PERIOD
A.D.
YEAR
MONTH
DAY
~
YEAR
MONTH
DAY
312
PROCESSING OBJECT
ALL
313
NO. OF DISPLAYED DOCUMENTS
20
314
315

FIG.3

| FREEWAY | STOP | FEE | PAY | METHOD |
|---|---|---|---|---|

FIG.4

| 321 WORD OR PHRASE | 322 NO. OF HIT DOCUMENTS | 323 SCORE | 324 SELECTION FLAG |
|---|---|---|---|
| FREEWAY | 1000 | 0.800 | ON |
| SPEEDWAY | 800 | 0.700 | ON |
| EXPRESSWAY | 600 | 0.200 | OFF |
| SUPERHIGHWAY | 400 | 0.500 | ON |
| WAY | 100,000 | 0.500 | OFF |
| . . . | . . . | . . . | . . . |
| METHOD | 4,000 | 0.010 | OFF |

FIG.6

| 341 ORIGINAL WORD OR PHRASE | 342 SYNONYM |
|---|---|
| FREEWAY | SPEEDWAY |
| | EXPRESSWAY |
| | SUPERHIGHWAY |
| | WAY |
| STOP | HALT |
| | HOLD |
| | INTERRUPT |
| . . . | . . . |

FIG.7

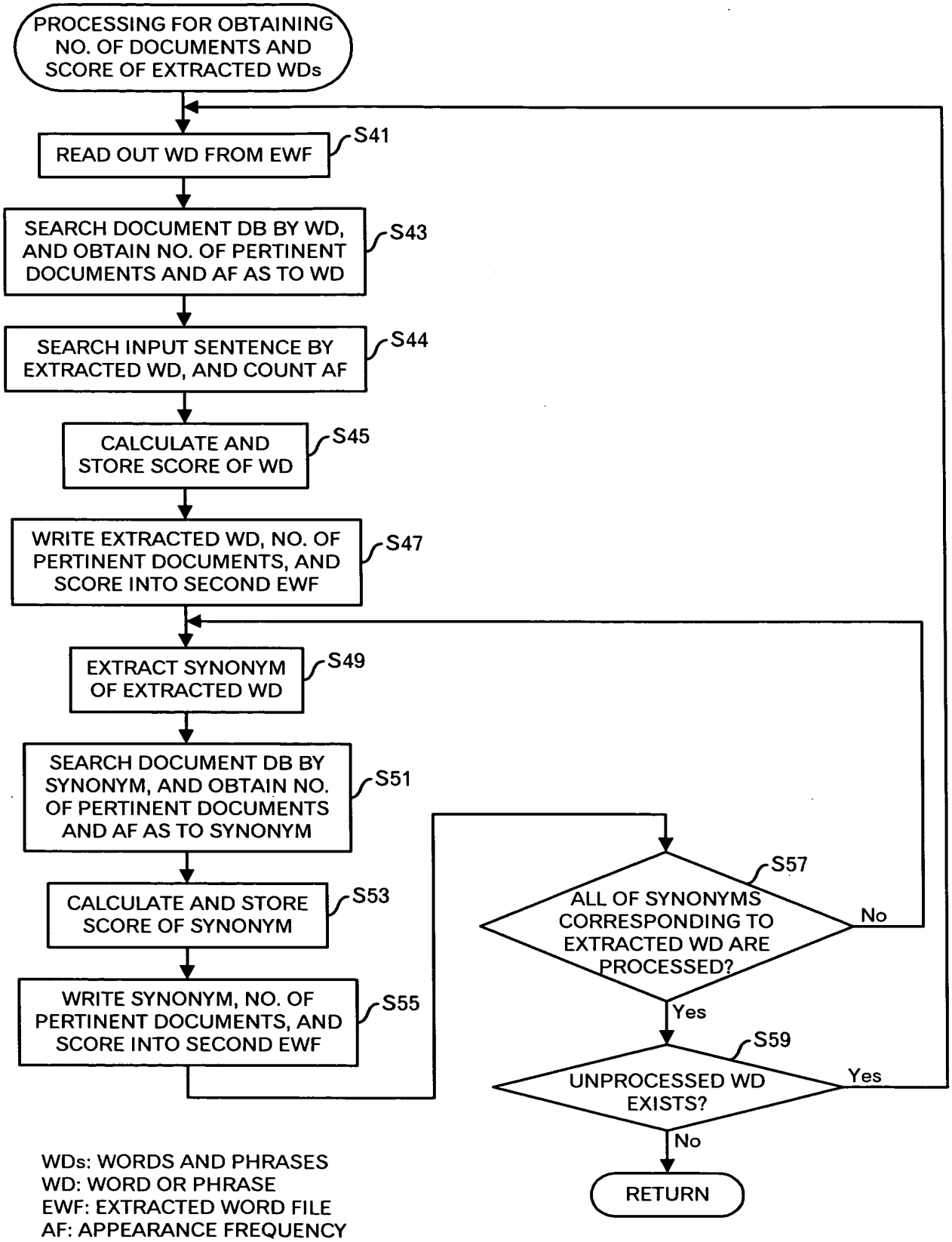
PROCESSING FOR OBTAINING NO. OF DOCUMENTS AND SCORE OF EXTRACTED WDs
READ OUT WD FROM EWF
S41
SEARCH DOCUMENT DB BY WD, AND OBTAIN NO. OF PERTINENT DOCUMENTS AND AF AS TO WD
S43
SEARCH INPUT SENTENCE BY EXTRACTED WD, AND COUNT AF
S44
CALCULATE AND STORE SCORE OF WD
S45
WRITE EXTRACTED WD, NO. OF PERTINENT DOCUMENTS, AND SCORE INTO SECOND EWF
S47
EXTRACT SYNONYM OF EXTRACTED WD
S49
SEARCH DOCUMENT DB BY SYNONYM, AND OBTAIN NO. OF PERTINENT DOCUMENTS AND AF AS TO SYNONYM
S51
CALCULATE AND STORE SCORE OF SYNONYM
S53
WRITE SYNONYM, NO. OF PERTINENT DOCUMENTS, AND SCORE INTO SECOND EWF
S55
ALL OF SYNONYMS CORRESPONDING TO EXTRACTED WD ARE PROCESSED?
S57
No
Yes
UNPROCESSED WD EXISTS?
S59
Yes
No
RETURN
WDs: WORDS AND PHRASES
WD: WORD OR PHRASE
EWF: EXTRACTED WORD FILE
AF: APPEARANCE FREQUENCY

FIG.5

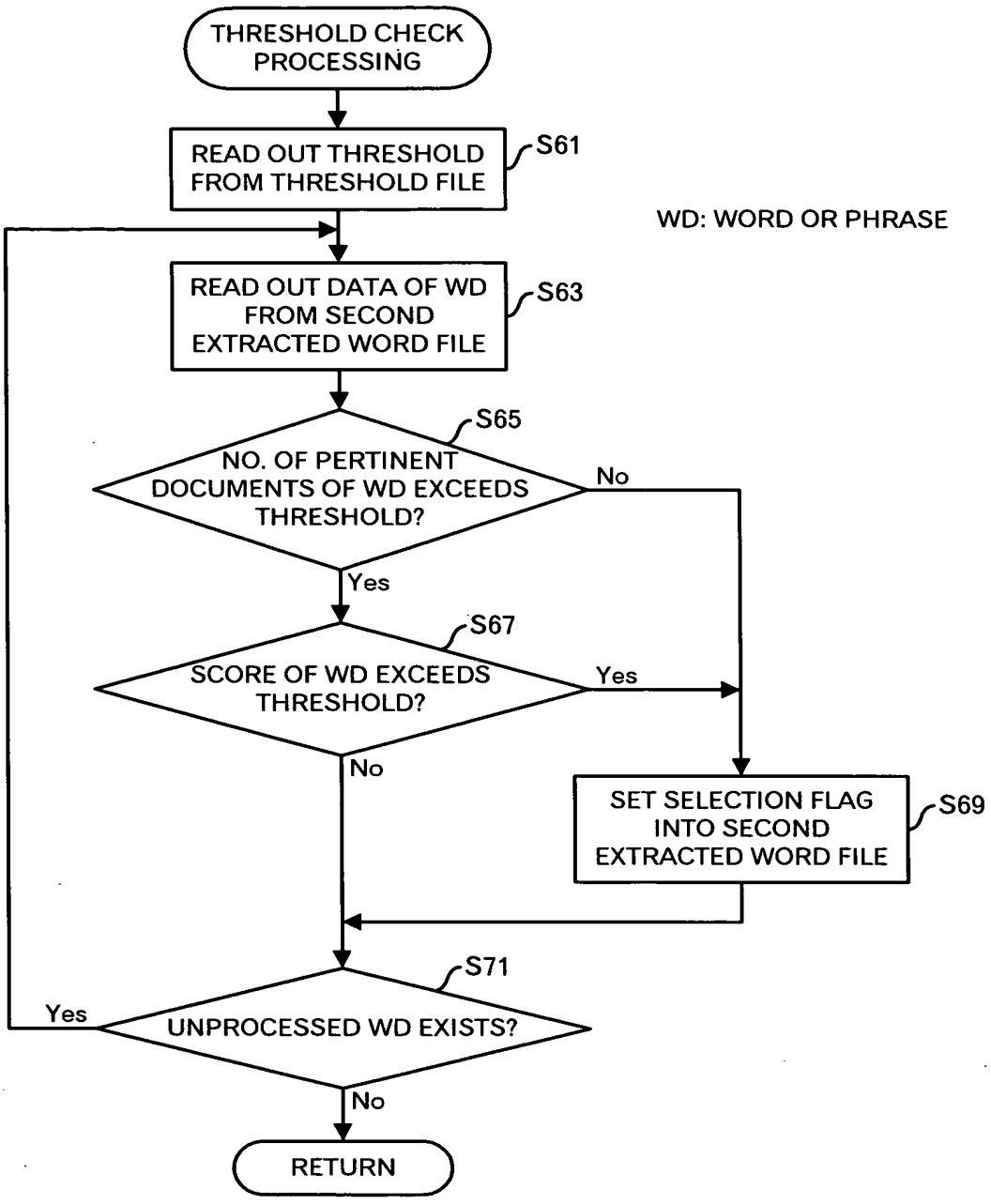


FIG.8

| 351 ITEM | 352 THRESHOLD |
|---|---|
| NO. OF DOCUMENTS | 1000 |
| SCORE | 0.300 |

FIG.9

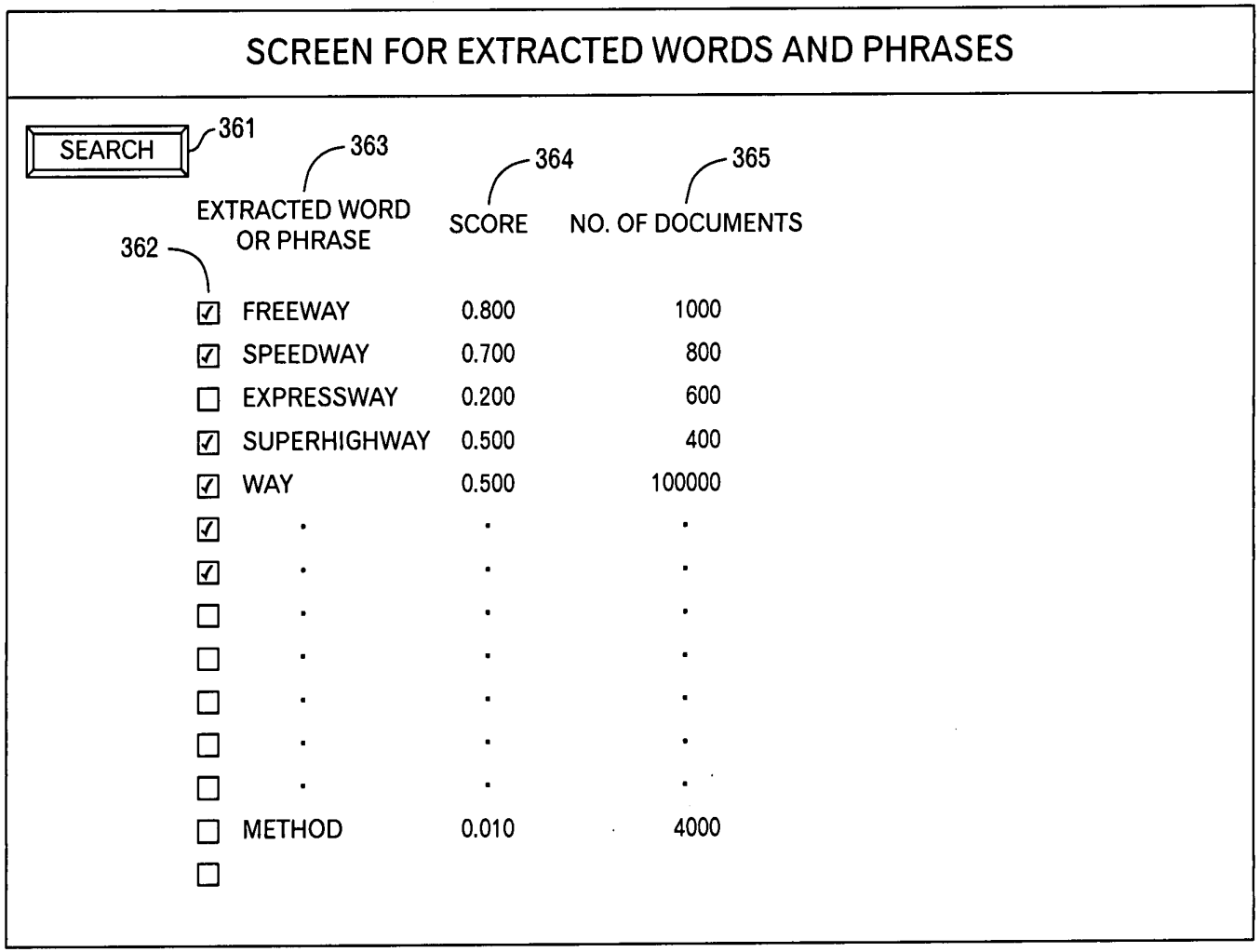
SCREEN FOR EXTRACTED WORDS AND PHRASES
SEARCH
361
363
364
365
EXTRACTED WORD OR PHRASE
SCORE
NO. OF DOCUMENTS
362
FREEWAY 0.800 1000
SPEEDWAY 0.700 800
EXPRESSWAY 0.200 600
SUPERHIGHWAY 0.500 400
WAY 0.500 100000
METHOD 0.010 4000

FIG.10

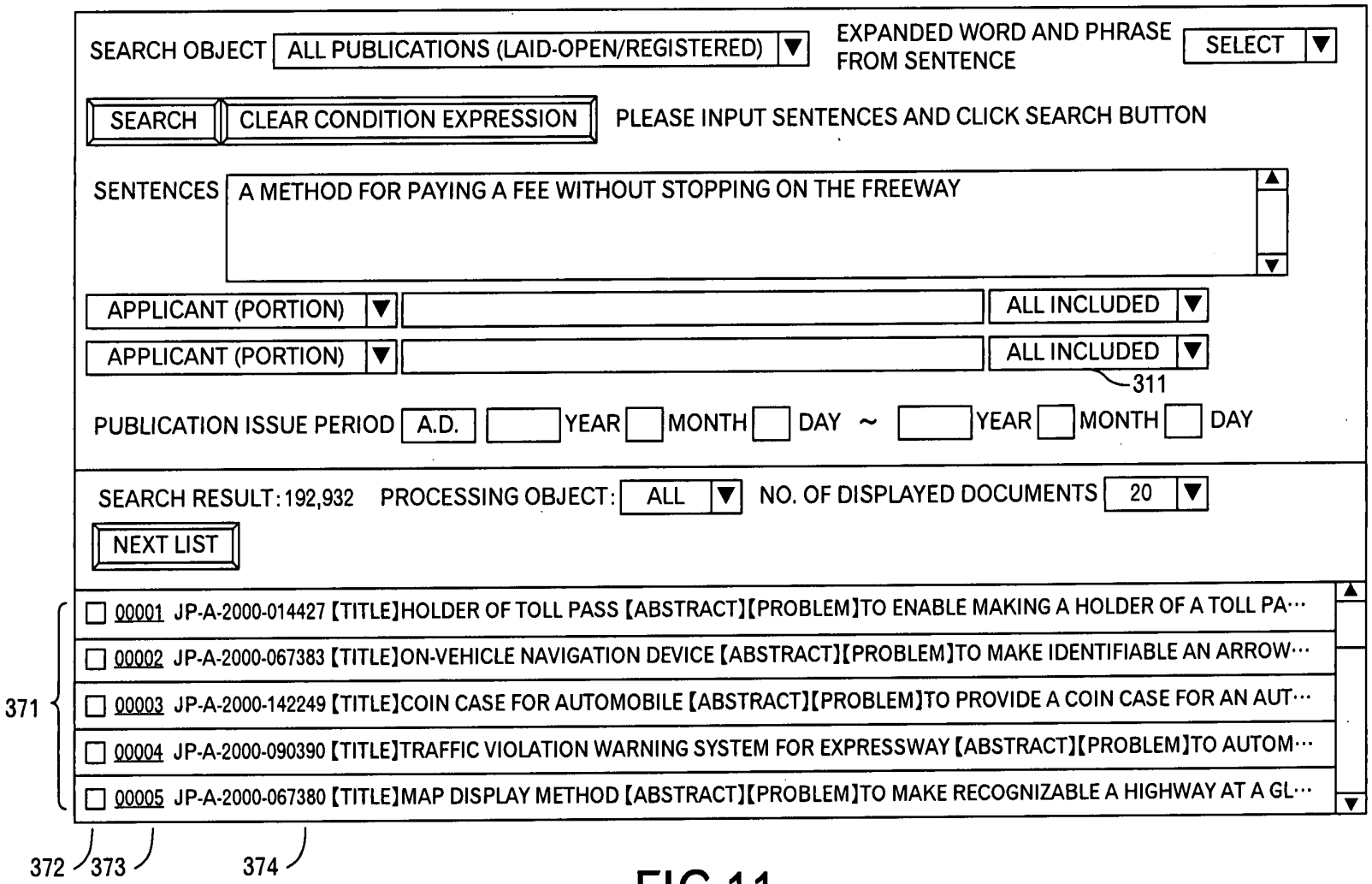
SEARCH OBJECT
ALL PUBLICATIONS (LAID-OPEN/REGISTERED)
EXPANDED WORD AND PHRASE FROM SENTENCE
SELECT
SEARCH
CLEAR CONDITION EXPRESSION
PLEASE INPUT SENTENCES AND CLICK SEARCH BUTTON
SENTENCES
A METHOD FOR PAYING A FEE WITHOUT STOPPING ON THE FREEWAY
APPLICANT (PORTION)
ALL INCLUDED
APPLICANT (PORTION)
ALL INCLUDED
311
PUBLICATION ISSUE PERIOD
A.D.
YEAR
MONTH
DAY
~
YEAR
MONTH
DAY
SEARCH RESULT: 192,932
PROCESSING OBJECT:
ALL
NO. OF DISPLAYED DOCUMENTS
20
NEXT LIST
00001 JP-A-2000-014427 【TITLE】HOLDER OF TOLL PASS 【ABSTRACT】【PROBLEM】TO ENABLE MAKING A HOLDER OF A TOLL PA…
00002 JP-A-2000-067383 【TITLE】ON-VEHICLE NAVIGATION DEVICE 【ABSTRACT】【PROBLEM】TO MAKE IDENTIFIABLE AN ARROW…
00003 JP-A-2000-142249 【TITLE】COIN CASE FOR AUTOMOBILE 【ABSTRACT】【PROBLEM】TO PROVIDE A COIN CASE FOR AN AUT…
00004 JP-A-2000-090390 【TITLE】TRAFFIC VIOLATION WARNING SYSTEM FOR EXPRESSWAY 【ABSTRACT】【PROBLEM】TO AUTOM…
00005 JP-A-2000-067380 【TITLE】MAP DISPLAY METHOD 【ABSTRACT】【PROBLEM】TO MAKE RECOGNIZABLE A HIGHWAY AT A GL…
371
372
373
374

FIG.11